

REMARKS

The Examiner is thanked for the due consideration given the application. The specification has been amended to insert headings.

Claims 1-21 are pending in the application. Claim 1 has been amended to better set forth the invention being claimed. Claims 2-21 have been amended to improve the language in a non-narrowing fashion.

No new matter is believed to be added to the application by this amendment.

Rejection Under 35 USC §112, Second Paragraph

Claims 1-21 have been rejected under 35 USC §112, second paragraph as being indefinite. This rejection is respectfully traversed.

The Official Action asserts that the claims are narrative in form since several of the elements are set forth in terms of operation rather than being structurally defined. According to the Official Action, the recitation at the end of claim 1 according to which the top box of the first stack is transferable directly to the second stack would lack the means by which this function is accomplished.

However, this recitation is not to be taken alone but in association with the text before and after this recitation, in particular the fact that at the predetermined height (where the

top box of the first stack (11) is repeatedly presented), the gap between the second upright (3) and said top box of the first stack (11) is left free, and the fact that the lateral displacement is at a more or less permanent level.

When this is taken into account, it is perfectly clear that this is a limitation expressed in a positive (and not a negative) manner directed to the fact that in the gap between the second upright (3) and the top box of the first stack (11), at the predetermined height, there is no obstacle preventing the direct transfer of the top box to the second stack by lateral displacement at a more or less permanent level.

Also, as explained in the specification at page 2, line 32 to page 3, line 4 in connection with the comments on the related art handling devices at page 1, line 33 to page 2, line 7, with the device according to the present invention, a simple gesture of the operator or actuator is sufficient for transferring the top box, such as an easy and fast evacuation of empty boxes, with little downtime increasing productivity.

Additionally, there is nothing wrong in defining a limitation by what it does, i.e., as a functional limitation.

A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself,

render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).

A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. *Innova/Pure Water Inc. v. Safari Water Filtration Sys. Inc.*, 381 F.3d 1111, 1117-20, 72 USPQ2d 1001, 1006-08 (Fed. Cir. 2004).

The claims, as amended, are thus clear, definite and have full antecedent basis.

This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

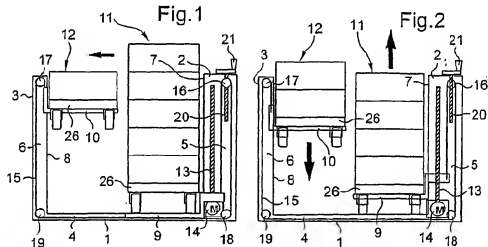
Rejections Under 345 USC §103(a)

Claims 1, 2, 4-6 and 15-20 have been rejected under 35 USC §103(a) as being unpatentable over ANTONELLO (U.S. Patent 4,601,386) in view of RAITERI (U.S. Patent 6,183,190). Claims 3, 7 and 8 have been rejected under 35 USC §103(a) as being unpatentable over ANTONELLO in view of RAITERI, and further in view of HESTON (U.S. Patent 5,971,700). Claim 9 has been rejected under 35 USC §103(a) as being unpatentable over ANTONELLO in view of RAITERI, and further in view of SANDERS

(U.S. Patent 4,021,019). Claims 10-13 and 21 have been rejected under 35 USC §103(a) as being unpatentable over ANTONELLO in view of RAITERI, and further in view of NISHITANI et al. (U.S. Patent 5,957,653). Claim 14 has been rejected under 35 USC §103(a) as being unpatentable over ANTONELLO in view of RAITERI, and further in view of HOFFEND, JR. (U.S. Patent 6,634,622).

These rejections are respectfully traversed.

The present invention pertains to a handling device for boxes that is illustrated, by way of example, in Figures 1 and 2 of the application, which are reproduced below.



The present invention repeatedly presents the top box of a first stack 11 of boxes at a predetermined height and making it possible to remove said top box in such a way that the boxes removed from the first stack 1 gradually form a second stack 1. The device includes a first vertically movable support 9 for

receiving said first stack 11, a second vertically movable support 10 for receiving said second stack 12, and means for synchronously driving the first and second supports 9, 10 so that when one goes up the other goes down.

Claim 1 of the present invention sets forth that the device includes:

a first lateral upright (2) positioned on a first side of the device and a second lateral upright (3) separate from the first upright (2) and positioned on a second side of the device, opposite the first side, each of said first upright (2) and second upright (3) being provided with a slideway (7, 8), the first support (9) being mounted on the slideway (7) of the first upright (2) and the second support (10) being mounted on the slideway (8) of the second upright (3), the device being adapted to leave free the gap between the second upright (3) and said top box of the first stack (11) at the predetermined height so that the top box of the first stack (11) is transferable directly to the second stack (12) by lateral displacement, i.e., oriented from the first side to the second side, at a more or less permanent level.

ANTONELLO pertains to a device for moving objects. Figure 1 of ANTONELLO is reproduced below.

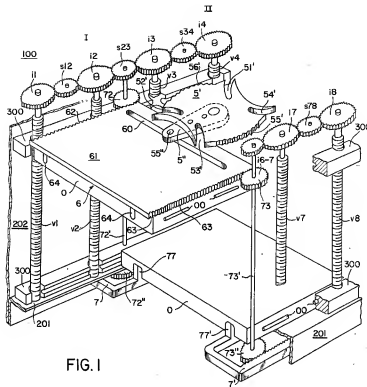


FIG. 1

The Official Action asserts that ANTONELLO discloses a first and second vertically movable support 0 and the other features in claim 1 except that the uprights on which are mounted the alleged supports 0 are not provided with slideways, but asserts that this would be disclosed by RAITERI.

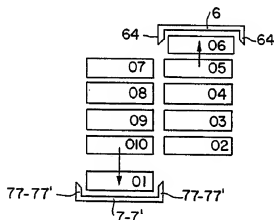
The Official Action fails to state which of support 01 to 010 disclosed by ANTONELLO would be the same as the first and second supports in claim 1.

The Official Action fails to state either that the alleged first and second supports 0 are able to receive respectively a first stack 11 and a second stack 12 of boxes, and that the device of ANTONELLO would be able to repeatedly present the top

box of the first stack 11 at a predetermined height and makes it possible to remove said top box in such a way that boxes removed from the first stack 11 gradually form the second stack 12.

Actually, as best seen in Figure 8 of the drawings in ANTONELLO (reproduced below), the objects 01 to 010 cannot be considered as the first and second supports in claim 1 of the present invention, but rather as the boxes forming the first stack and the second stack.

FIG.8



The boxes 01 to 010 in ANTONELLO are supported by screws VI to VS, which are rotationally movable.

More precisely, as best seen in Figures 1, 4 and 7 to 12, stack I and stack II are disposed respectively inside screws VI, V2, V5 and V6; or V3, V4, V7 and V8.

For cooperating with screws VI to V8 boxes 01 to 010 are provided on the wall sides turned towards the screws with ribs 00

having a cross-sectional shape substantially corresponding to the thread space of the screws.

The man skilled in the art has no reason to replace screws VI, V2, V5 and V6 by a first vertically movable support for receiving stack I and to replace screws V3, V4, V7 and V8 by a second vertically movable support for receiving stack II.

Instead, ANTONELLO teaches the rotating movement of the screws for controlling the sequence of motion of the screws and of the upper carriage 6 and lower carriage 7 by two Maltese cross-type gears.

This clearly leads the man skilled in the art away from replacing screws VI to V8 by any non-rotating support such as the first and second vertically movable support in claim 1.

One of ordinary skill and creativity in the art thus has no reason to replace screws VI to V8 by the combination of:

- a first vertically movable support for receiving stack I;
- a second vertically movable support for receiving stack II;

- a first lateral upright provided with a slideway on which is mounted the first support; and

- a second lateral upright separate from the first upright provided with a slideway on which is mounted the second support.

Further, one of ordinary skill and creativity in the art has no reason to position the first upright on a first side of the device and to position the second upright on a second side

opposite the first side with the displacement between stack I to stack II oriented from the first side to the second side.

This would imply to position the first upright on one side of the machine of ANTONELLO where there are none of the screws VI to V8, and to position the second upright on the other side of the machine where there are none of the screws VI to V8.

Such considerable modifications are clearly out of the reach of one of ordinary skill and creativity in the art.

The Official Action acknowledges the ANTONELLO fails to disclose slideways. The Official Action refers to RAITERI for these teachings.

Turning now to RAITERI, it is not reasonable to consider, as the Official Action does, only loading station 47 and unloading station 48 of a most complex machine 10.

In particular, as best seen on Figures 4 and 9 to 12, loading station 47 feeds the end of table 18 seen on the right hand side, and the end of table 18 seen on the left hand side feeds unloading station 48. Figure 4 of RAITERI is reproduced below.

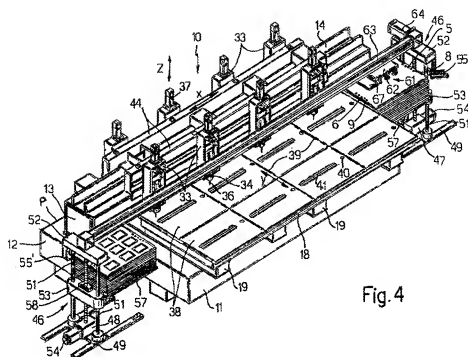


Fig. 4

The man skilled in the art would have no motivation to feed unloading station 48 directly from loading station 47. Therefore, he would never look for teachings in RAITERI.

Also, the teaching of RAITERI is directed on how to prevent the use of boxes in the loading and unloading stations (see in particular column 1, lines 13 to 65). This clearly teaches away from the device subject-matter of claim 1 of the present invention, which is directed to the handling of boxes and the like.

One of ordinary skill and creativity would thus fail to produce claim 1 of the present invention from a knowledge of ANTONELLO and RAITERI. HESTON, SANDERS, NISHITANI et al. and HOFFEND, JR. fail to address the above-described deficiencies of

ANTONELLO and RAITERI. A *prima facie* case of unpatentability has thus not been made. Claims depending upon claim 1 are patentable for at least the above reasons.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The rejections are believed to be overcome, obviated or rendered moot, and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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